

Question 1

What is the optimal value of alpha for ridge and lasso regression? What will be the changes in the model if you choose double the value of alpha for both ridge and lasso? What will be the most important predictor variables after the change is implemented?

Ridge Regression Optimal value of alpha – 0.6

Lasso Regression Optimal value of alpha – 0.01

After doubling the alpha for both the regression the r^2 value increased for Ridge for Lasso it turned out to be 0.

Question 2

You have determined the optimal value of lambda for ridge and lasso regression during the assignment. Now, which one will you choose to apply and why?

Will choose RIDGE Regression as the R^2 square value is higher

Question 3

After building the model, you realised that the five most important predictor variables in the lasso model are not available in the incoming data. You will now have to create another model excluding the five most important predictor variables. Which are the five most important predictor variables now?

Five important predictor variables are

Neighborhood

LotArea

GarageArea

RoofStyle_6

RoofMatl_3

Question 4

How can you make sure that a model is robust and generalisable? What are the implications of the same for the accuracy of the model and why?

First, The data should be cleaned up properly by removing not required variables, taking care of missing values.

The model should not Overfit or Underfit

Bias and Variance should be low